

REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 21-36 are now presented for consideration in lieu of claims 1-20, which have been canceled without prejudice or disclaimer. Claim 21 is the sole independent claim. Support for these claims can be found in the original application, as filed. Therefore, no new matter has been added.

Applicants request favorable reconsideration and withdrawal of the rejections set forth in the above-noted Office Action.

Claims 20 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner objected to claim 20 on various grounds. Claim 20 having been canceled, this rejection has become moot and should be withdrawn. Nevertheless, the Examiner's comments were taken into consideration when presenting new claims 21-36.

Turning now to the art rejections, claims 1, 3-11, 16-18 and 20 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent application publication number 2002/019166 A1 to Hasegawa et al. Claims 3, 5 and 6 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent application publication number 2002/0191163 A1 to Hasegawa et al. Claims 7 and 9-11 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,801,352 to Piwczyk. Claims 12, 14 and 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent application publication number 2001/0038442 A1 to Hansell et al. Claims 12, 14 and 15 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S.

Patent No. 6,731,371 to Shiraishi et al. Claims 2 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Hasegawa et al. '166 publication as applied to claims 1 and 3 above, and further in view of U.S. patent application publication number 2003/0025889 to Hasegawa et al. Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Hansell et al. publication as applied to claim 12 above, and further in view of the Hasegawa et al. '166 publication. Applicants submits that the cited art, whether taken individually or in combination, does not teach many features of the present invention as previously recited in claims 1-20. Therefore, these rejections are respectfully traversed. Nevertheless, Applicants submit that independent claim 21, for example, amplifies the distinctions between the present invention and the cited art.

Independent claim 21 recites an exposure apparatus for exposing a substrate to light via a mask. The apparatus includes a projection optical system configured to project a pattern of the mask onto the substrate, a cover configured to surround a path of light from the projection optical system toward the substrate, a first supply port arranged inside the cover and configured to supply inert gas inside the cover, a first recovery port arranged inside the cover and configured to recover gas inside the cover, a second supply port arranged outside the cover and configured to supply gas outside the cover, and a second recovery port arranged outside the cover and configured to recover gas outside the cover. The first direction from the first supply port to the first recovery port and a second direction from the second supply port to the second recovery port oppose each other at an angle not greater than 90°.

Accordingly, the present invention recited in independent claim 21 provides that a first direction from the first supply port to the first recovery port and a second direction from the second supply port to the second recovery port oppose each other at an angle not greater than 90°. Support for such features of the present invention can be found in the original disclosure on page 29, lines 8-12, with respect to the discussion of Figures 5A, 5B and 6. In this regard, the first supply port and the first recovery port may be considered to correspond to the supply port 6 and the recovery port 7. Also, the second supply port and the second recovery port may be considered to correspond to the blow-out port 16 and the suction port 15, which are shown in Figure 12.

Applicants submit that the cited art, whether taken individually or in combination, does not teach or suggest such features of the present invention, as recited in independent claim 21.

The Hasegawa et al. '163 and '166 publications show, in Figure 1, an air supply portion 112, an exhaust portion 117, a second air supply port 121 and a second exhaust portion 122, which may be considered to correspond to the first supply port, the first recovery port, the second supply port and the second recovery port of the present invention recited in independent claim 21. Applicants submit, however, that Figure 1 of the Hasegawa et al. publications show that the direction from the air supply portion 112 to the exhaust portion 117 is the same as the direction from the second air supply portion 121 to the second exhaust portion 122. Accordingly, Applicants submit that the Hasegawa et al. publications fail to teach or suggest salient features of Applicants' present invention, as recited in independent claim 21, in which the first direction

from the first supply port to the first recovery port and the second direction from the second supply port to the second recovery port oppose each other at an angle not greater than 90°.

Applicants further submit that the remaining art cited does not cure the deficiencies noted above with respect to the Hasegawa et al. publications.

The Examiner relies on the Piwczyk patent for showing an exposure apparatus having an irradiation system 20, as well as a cover 1 with a first supply port 11 for gas and a second supply port 15 in a lower portion of cover 1, a first recovery port 14 through which gas supplied through first and second supply ports is drawn by suction and a second supply port 15 surrounding a periphery of an exposure area.

The Examiner relies on the Hansell et al. publication for showing an exposure apparatus with scavengers and a semiconductor wafer surface 216. Specifically, the Examiner considers scavenger 302 to be the cover and a first supply to include element 316. Further, the Examiner considers plural ports 330 to comprise first and second recovery ports through which purged gas is drawn.

Still further, the Examiner considers the Shiraishi patent to teach in Figure 5 a cover and a first supply port inside the cover connected to element 81.

Applicants submit, however, that these remaining citations, as with the Hasegawa et al. publications, fail to teach or suggest salient features of Applicants' present invention, as recited in independent claim 21, including the arrangement in which a first direction from a first supply port to a first recovery port and a second direction from a second supply port to a second recovery port oppose each other at an angle not greater than 90°. Applicants submit, therefore,

that these remaining citations add nothing to the teachings of the Hasegawa et al. publications that would render obvious Applicants' present invention, as recited in independent claim 21.

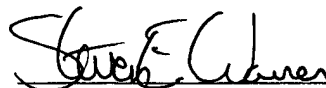
For the foregoing reasons, Applicants submit that the present invention, as recited in independent claim 21, is patentably defined over the cited art, whether that art is taken individually or in combination.

Dependent claims 22-36 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in independent claim 21. Further individual consideration of these dependent claims is requested.

Applicants further submit that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action and an early Notice of Allowance are requested

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010 All correspondence should continue to be directed to our address given below.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Steven E. Warner", is written over a horizontal line.

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